2004 Annual Water Quality Report

City of Falls Church
Department of Environmental Services

Dear Valued Customer:

The following 2004 Water Quality Report contains important information about your drinking water over the past year, from the source to the tap. We are pleased to report that we have been able to provide you with water that met or exceeded the standards set by the U.S. Environmental Protection Agency (EPA).

Last year, Hurricane Isabel tested our ability to keep the water system operating safely. Due to the tenacious efforts of City utilities staff, we were able to weather the storm without serious disruptions in service to our customers.

This year has seen intense media coverage of elevated lead levels in drinking water. In response to these concerns, the City tested nearly 400 residences and every public and private school that we serve, including many preschools and day care centers. Only two percent of the residences showed lead levels above the EPA recommended action level; follow-up sampling showed, in all cases, that running the water for a few minutes reduced the lead levels to below the action level. Of the school and day care samplings, four indicated fixtures with lead levels greater than the EPA recommended limit; these findings were provided to the schools for corrective action. More details of the testing program are contained in this report.

In order to reduce the elevated lead levels in homes in Washington, D.C., the Washington Aqueduct, which supplies our water, will begin a proven treatment technique that will reduce the lead that enters the water through lead-based plumbing. When this change takes place, currently expected in August 2004, you should not experience any changes in the taste, color, or odor of your water.

We hope you find this report useful. Please contact the City's Public Utilities Division at 703-248-5070 or via email at water@ci.falls-church.va.us with questions or comments.

El informe contiene información importante sobre la calidad del agua en su comunidad. Tradúzcalo o hable con alguien que lo entienda bien.

Ban bao cao co ghi nhung chi tiet quan trong ve pham chat nuoc trong cong dong quy vi. Hay nho nguoi thong dich, hoac hoi mot nguoi ban biet ro ve van de nay.

The City of Falls Church Department of Environmental Services's drinking water meets or surpasses all federal and state drinking-water standards.

Call us for information about the next opportunity for public participation in decisions about our drinking water. Falls Church City Council meetings generally are held the 2nd and 4th Mondays each month at 7:30 PM in City Hall at 300 Park Ave., Falls Church VA 22046. If you have any questions about this report, please contact Mr. Matthew Jacobi by phone at (703) 248-5070, or by email at mjacobi@ci.falls-church.va.us. More information is available on the World Wide Web at www.waterdata.com and at www.epa.gov/safewater. This report is also posted on the City's website at www.ci.falls-church.va.us.

What is the Source of My Drinking Water?

The City of Falls Church Department of Environmental Services is supplied by the Washington Aqueduct (WA) and the Fairfax County Water Authority (FCWA), which draw the water from the Potomac River. The Washington Aqueduct also supplies water to Arlington County, Virginia and the District of Columbia.

A source water assessment for the FCWA has been conducted by the Virginia Department of Health. The Potomac River was determined to be highly susceptible to contamination using the criteria developed by the state in its approved Source Water Assessment Program, which is consistent with the state's finding for other surface waters (rivers, lakes, streams) thoughout Virginia. The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last five years. A copy of the report is available by contacting the City's Public Utilities Division.

A detailed source water assessment to find better ways to protect the water sources for WA is in process. After the assessment is complete, information will be available about potential sources of contamination and measures to reduce/eliminate those sources.

How Do I Read The Charts Below?

The City of Falls Church and our water suppliers routinely monitor for constituents in your drinking water according to federal and state laws. Table 1 shows the results from monitoring that the City conducted, while Table 2 shows the results of monitoring by the Washington Aqueduct and the Fairfax County Water Authority.

In the tables you may find many terms and abbreviations that are unfamiliar. To help you better understand these terms, we have provided the following definitions:

Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level or MRDL: The highest level of a residual disinfectant that is allowed in drinking water.

Maximum Residual Disinfectant Level Goal or MRDLG: The level of residual disinfectant below which there is no known or expected risk to health. MRDLGs allow for a margin of safety.

Detected Level: The highest level detected of a contaminant for comparisons against the acceptance levels for each parameter. These levels could be the single highest measurement, or an average of values depending on the contaminant.

Action Level (AL): The concentration of a contaminant, which, if exceeded, triggers treatment, or other requirement that a water system must follow.

Non-Detects (ND): Laboratory analysis indicates that the constituent is not present.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Parts per billion (ppb): One part per billion corresponds to a single penny in $10,000,000.

Parts per million (ppm): One part per million corresponds to a single penny in $10,000.

Picocuries per liter (pCi/L): Picocuries per liter is a measure of the radioactivity in water.

Finished Water Characteristics, City of Falls Church Distribution System Monitoring — TABLE 1

Substance	Unit	MCLG	MCL	Reporting Level	Range	Major Sources
Total Coliform	% of samples	0	5	2	N/A	Naturally present in environment
Chloramines	ppm	(MRDLG) 4	(MRDL) 4	2.33	N/A	Water additive used to control microbes
Copper[1]	ppm	1.3	1.3	0.24	ND - 0.24	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives
Lead[2]	ppb	0	15	6	ND - 6	Corrosion of household plumbing systems; Leaching from wood preservatives
Total Trihalomethanes	ppb	0	80	32	1 - 46	Byproduct of drinking water chlorination
Total Haloacetic Acids	ppb	N/A	60	29	7 - 45	Byproduct of drinking water chlorination

Finished Water Characteristics, Source Monitoring — TABLE 2

				WA		FCWA		
Substance	Unit	MCLG	MCL	AVG	RANGE	AVG	RANGE	Major Sources
Alpha Emitters[3]	pCi/L	0	15	ND	ND - 2.1	0.7	0.2 - 1.2	Erosion of natural deposits
Arsenic	ppb	N/A	50	ND	ND - 0.6	ND	ND	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes
Atrazine	ppb	3	3	ND	ND - 0.3	ND	ND - 0.5	Runoff from herbicide used on row crops
Barium	ppb	2	2	0.04	0.03 - 0.05	0.04	0.02 - 0.07	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beta/photon Emitters[3,4]	PCi/L	0	50	2.1	1.2 - 3	4.2	3.4 - 6	Decay of natural and man-made deposits
Chromium	ppb	100	100	1.4	0.7 - 3	ND	ND	Discharge from steel & pulp mills; Erosion of natural deposits
Fluoride	ppm	4	4	0.9	0.7 - 1	0.8	0.3 - 1.3	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer & aluminum factories
Hexachlorocyclopentadiene	ppb	N/A	N/A	ND	ND	0.01	ND - 0.1	Discharge from chemical factories
Nitrate	ppm	10	10	2	1.3 - 2.9	1.2	0.6 - 1.8	Runoff from fertilizer use; Leaching from septic tanks; Erosion of natural deposits
Nitrite	ppm	1	1	ND	ND	ND	ND - 0.05	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium	ppb	50	50	ND	ND - 0.7	ND	ND	Discharge from petroleum refineries; erosion of natural deposits; discharge from mines
Simazine	ppb	4	4	ND	ND - 0.09	0.05	ND - 0.2	Herbicide runoff
Total Organic Carbon	ratio	N/A	TT[5]	1.7[6]	1.15 - 2.07	1.1[6]	1.0 - 1.6	Naturally present in the environment
Turbidity	NTU	N/A	TT	0.05	0.07[7]	0.08	0.75[8]	Soil runoff

Water-Quality Table Footnotes

1) No samples exceeded AL. Data is from 2001 due to Ultimate Reduced Monitoring Status. Next monitoring will be in 2004.
2) One sample exceeded AL. Data is from 2001 due to Ultimate Reduced Monitoring Status. Next monitoring will be in 2004.
3) WA testing performed in 2002.
4) The MCL for the Beta particles is written as 4 mrem/year. EPA considers 50 pCi/l to be the level of concern for Beta particles.
5) Total Organic Carbon has no health effects. However, it provides a medium for the formation of disinfection byproducts, which include trihalomethanes and haloacetic acids. Compliance with the treatment technique (TT) reduces the formation of these by products.
6) Average reported for Total Organic Carbon is Quarterly Running Annual Average (QRAA) of the monthly ratio of actual Total Organic Carbon removal versus required Total Organic Carbon removal between source and treated waters. A QRAA of 1 or greater is to be in compliance.
7) 100% of samples tested were below the treatment technique level of 0.3 NTU. The single highest measurement was 0.07 NTU is reported here. Any single measurement in excess of 1.0 NTU is a violation unless otherwise approved by the state. Turbidity is measured because it is a good indicator of the effectiveness of the filtration system used.
8) 99.995% of samples tested were below the treatment technique level of 0.3 NTU. The single highest measurement of 0.75 NTU is reported here. Any single measurement in excess of 1.0 NTU is a violation unless otherwise approved by the state. Turbidity is measured because it is a good indicator of the effectiveness of the filtration system used.

Key To Tables

AL = Action Level
MCL = Maximum Contaminant Level
TT = Treatment Technique
MCLG = Maximum Contaminant Level Goal
MRDL = Maximum Residual Disinfectant Level
ppb = parts per billion, or micrograms per liter (µg/l)
NTU = Nephelometric Turbidity Units
MRDLG = Maximum Residual Disinfectant Level Goal
mrem/year = millirems per year
pci/l = picocuries per liter (a measure of radioactivity)
ND = none detected
ppm = parts per million, or milligrams per liter (mg/l)
N/A = not applicable

About Cryptosporidium

Our water suppliers have analyzed for Cryptosporidium and results showed that none were detected. This parasite can cause outbreaks of intestinal disease, but scientists have not yet determined the best testing methods, or the levels at which a public health danger occurs. Based on current knowledge, Cryptosporidium does not present a health risk for the general public.

Important Health Information About Drinking Water

To ensure that tap water is safe to drink, EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

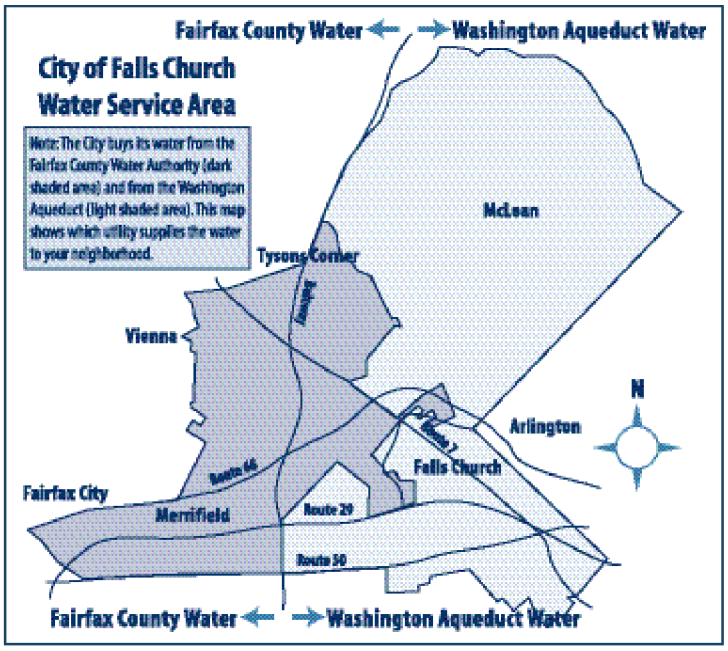
Should Some People Take Special Precautions?

To ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. U. S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than is the general population. Immuno-compromised people such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/ Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline (800-426-4791).

Recent Concerns about Lead in Drinking Water

In light of concerns about the possibility of elevated lead levels associated with water supplied by the Washington Aqueduct, the City embarked on a lead testing program in advance of the next round of compliance sampling. This extra sampling included



public and private schools, daycares/preschools and residences. As of June 1, 2004, out of 387 samples collected from 39 public and private schools, and 13 daycares/preschools that receive water from the City, four indicated fixtures with lead levels greater than the EPA recommended limit. Findings for these fixtures were immediately provided to school officials for corrective action.

Testing at almost 400 residences indicated that only two percent of first draw samples showed lead levels greater than the EPA action level of 15 ppb. Follow-up sampling at residences with first draw results over the action level showed that, in all cases, letting the water run for a few minutes before collecting the sample reduced lead levels to below the action level.

To minimize the possibility of consuming water that contains lead leached from internal plumbing systems and fixtures, all water customers should be sure to:

- Flush the faucet for 60-90 seconds if the home water supply has been idle for six hours or more.
- Cook and prepare baby formula only with cold water.
- If using a water filter, choose one designed for the specific filtration desired (e.g. lead); make sure the filter is approved by the National Sanitation Foundation; maintain the filter as directed.

If you have further questions about lead in drinking water, please call the City's Public Utilities Division at 703-248-5070. Information is also available on the EPA's website at http://www.epa.gov/safewater/lead/index.html.

Want More Information?

If you have any questions about this report, or need more information, please let us know.

Customer Service Division (billing questions)	(703) 248-5071
Public Utilities Division (technical questions)	(703) 248-5070
This report may be viewed on the web at:	www.ci.falls-church.va.us

Please address correspondence to:

City of Falls Church
Department of Environmental Services
Public Utilities Division
300 Park Avenue
Falls Church, VA 22046

This report contains very important information about your drinking water. Please translate it, or speak with someone who understands it.

El informe contiene información importante sobre la calidad del agua en su comunidad. Tradúzcalo o hable con alguien que lo entienda bien.

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